IN THE CLAIMS

Please amend the claims as indicated:

1. – 3. (canceled).

4.   (original) A method for synchronizing a sparse logical volume within a mirrored physical volume configuration after one of said mirrored physical volumes has been damaged, said method comprising:

replacing said damaged physical volume with a replacement physical volume;

interrogating a partition within said sparse logical volume;

in response to said partition within said sparse logical volume being allocated, copying said partition to said replacement physical volume and returning to said interrogating until all partitions within said sparse logical volume have been interrogated; and

in response to said partition within said sparse logical volume not being allocated, returning to said interrogating until all partitions within said sparse logical volume have been interrogated.

5.   (original) The method of Claim 4, wherein said method further includes allocating only in-use partitions of said sparse logical volume in said mirrored physical volumes.

6.   (original) The method of Claim 4, wherein said method further includes recording the relationship between partitions within said sparse logical volume and partitions within said mirrored physical volumes in a mapping list.

7.   (original) The method of Claim 4, wherein said method further includes recording the relationship between partitions within said sparse logical volume and partitions within said mirrored physical volumes in an extent list.

8. – 16. (canceled).

17.   (previously presented) The method of Claim 4, wherein said copying comprises:

copying to storage in said physical partition for only storage locations in said logical partition that contain valid data; and

not copying to storage in said physical partition for storage locations in said logical partition that do not contain valid data.

18. – 19. (canceled).